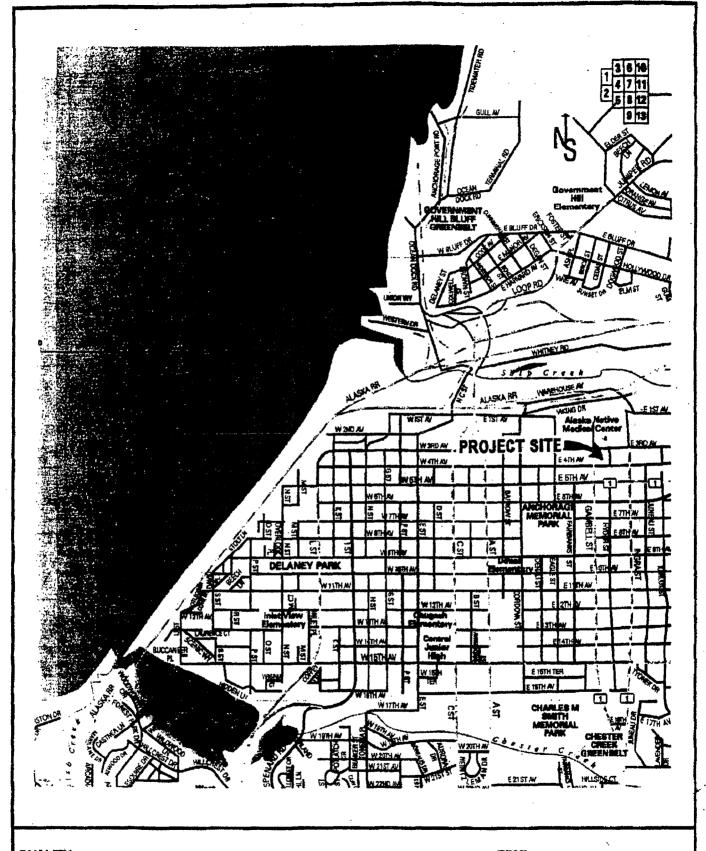
p.22



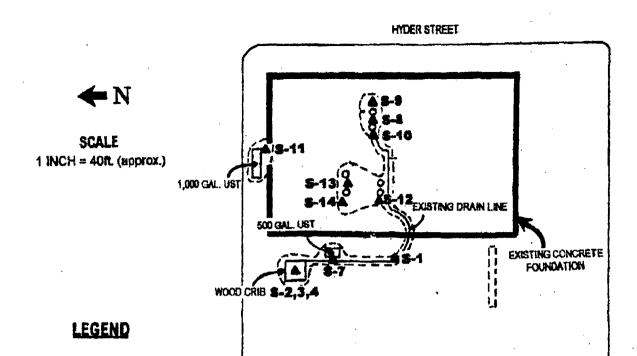
QUALITY ENVIRONMENTAL SAMPLING

VICINITY MAP

EPMI 4th & GAMBELL ANCHORAGE, ALASKA

FIGURE 1

HE AVE.



Indicates approximate sample

▲ location with approx. depth and
PID result indicated below.

Indicates approximate limits of excavation and/or trench.

O of hydraulic lift.

SAMPLE	DEPTH (fL)	PID (pom)
S-1	8	143
S-2	15	440
S-3	19	1,142
S-4	12	1,280
S-5	7	180
\$-6	12	103
S-7	7	111
S-8	11	24.3
3-9	7	24.5
\$-10	9	10.2
S-11	9	2,000
S-12	9	467
S-13	10	138
S-14	9	201

LOG CRIB

AS-5

APPROXIMATE EDGE OF CURB

GAMBELL STREET

SITE PLAN/SAMPLE LOCATIONS

EPMI 4th'& GAMBELL ANCHORAGE, ALASKA

FIGURE 2



SCALE
1 INCH = 40ft. (approx.)

LEGEND

•

MONITORING WELL NUMBER AND APPROXIMATE LOCATION

***51.75.

GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR AND APPROXIMATE RELATIVE ELEVATION IN FEET



INFERRED GROUNDWATER - MIGRATION DIRECTION

INDICATES APPROXIMATE AUGUST 1997
LIMITS OF EXCAVATION AND/OR TRENCH

A

INDICATES APPROXIMATE AUGUST 1997 SOIL SAMPLE LOCATIONS

o INDICATES APPROXIMATE LOCATION OF HYDRAULIC LIFT

Elevations are relative to the project datum located on the northwest anchor bolt on the light post at the southeast corner of the site with an assigned elev. of 100.00ft

1000 GAL UST 500 GAL UST EXISTING CONCRETE FOUNDATION 4th AVE. BURNED DRUM AREA LOG CRIB **GAMBELL STREET**

QUALITY ENVIRONMENTAL SAMPLING

SITE PLAN/SAMPLE LOCATIONS

EPMI 4th & GAMBELL ANCHORAGE, ALASKA

FIGURE 3

APPENDIX C

SAMPLE RESULTS TABLES



TABLE 1 - HYDROCARBON CONTENT IN SOIL						
SAMPLE IDENTIFICATION	PID Reading	AK 102 ANALYSIS (parts per million)	AK103 ANALYSIS (parts per million)			
S1 - Break in Piping 8' bgs	143		253			
S8 - Between Hydro Lift 11' bgs	24.3		4,830			
S9 - East Side Hydro Lift 7' bgs	24.6		ND			
S10 - West Side Hydro Lift 9' bgs	10.2		ND			
S12 - Hydro Reservoir 9' bgs	467	*****************	ND			
S13 - Between Hydro Lift 10' bgs	138		2,660			
S14 - Below Hydro Piping 9' bgs	201		ND			
S7 - Below 500 gal UST 7' bgs	111	223				
S11 - Below 1,000 gal UST 9' bgs	2,000	ND				
MW-1 S-2 - Well 1 at 35' bgs	156		16			

TABLE 2 - VOLATILE ORGANIC COMPOUNDS IN SOIL							
ANALYTE	S 3	S4	\$5	S6			
n-Butylbenzene	ND	19,800 ppb	ND	ND T			
sec-Butylbenzene	ND	15,600 ppb	ND	ND			
cis-1,2-Dichloroethylene	ND	800 ppb	ND	ND			
Ethylbenzene	ND	5,500 ppb	ND	ND			
Isopropylbenzene	ND	2,900 ppb	ND	ND			
p-Isopropyltoluene	ND	102,000 ppb	ND	ND			
Naphthalene	ND .	8,000 ppb	ND	ND			
Tetrachloroethylene	ND	4,500 ppb	3,200 ppb	1,000 ppb			
Toluene	ND	9,000 ppb	ND	ND			
1,2,4-Trimethlybenzene	ND	178,000 ppb	ND	ND			
1,3,5-Trimethlybenzene	ND	49,500 ppb	ND	ND			
Total Xylenes	ND	52,000 ppb	ND	ND			

^{*}Reported in Parts Per Billion (ppb)

TABLE 3 - METAL ANALYSIS IN SOIL (ppm)						
ANALYTE	S1	S 3	S4	· S6	MW-1 S-2 TCLP	
Ag - Silver	ND	ND	1	ND		
As - Arsenic	3	1	9	7	ND	
Ba - Barium	19.0	153	753	2.3		
Cd - Cadmium	ND	ND	20	ND	ND	
Cr - Chromium	11	10	27	8	ND	
Hg - Mercury	ND	ND	0,14	0.15	***	
Pb - Lead	4	4	996	4	ND	
Se	ND	ND	ND	ND		

TABLE 4 - MONITORING WELL ANALYSIS							
ANALYTE	MW-1 (Water)	MW-1 S-2 TCLP (Soil)	MW-2 (Water)	MW-3 (Water)			
TPH (Soil)		16 ppm	****				
TPH (Water)	ND		ND				
As - Arsenic	ND	ND	ND	W			
Cd - Cadmium	ND	ND	ND	# 10 mm to			
Cr - Chromium	ND	ND	ND				
Pb - Lead	ND	ND	ND				
Tetrachloroethylene	4,250 ppb	2,200 ppb	ND	ND			
Other VOCs	ND	ND	ND	ND			

APPENDIX G

ADEC MATRIX SHEET

ADEC SOIL CLEANUP LEVEL MATRIX TABLE

SITE CHARACTER	USTIC	POSSIBLE SCORE	S	CORE		
1. Depth to Subsurface < 5 feet 5 to 15 feet 15 to 25 feet 25 to 50 feet > 50 feet	(10) (8) (6) (4) (1)		4			
2. Mean Annual Precipittion > 40 inches 25 to 40 inches 15 to 25 inches < 15 inches	(10) (5) (3) (1)		5			
3. Soil Type (Unified Soil Class Clean, coars-grained soils Coarse-grained soils with fir Fine-grained sils (low organ Fined-grained soils (high organ)	(10) (8) (3) (1)	·	8			
4. Potential Receptors Public Well within 1,000 feet or Private well(s) within 500 feet Municipal/private well within ½ mile Municipal/private well within 1 mile No known well within ½ mile No known well within 1 mile Non-potable groundwater		(15) (12) (8) (6) (4) (1)		12		
5. Volume of Contaminated Soil >500 cubic yards 100 to 500 cubic yards 25 to 100 cubic yards >De Minimis to 25 cubic yards De Minimis		(10) (8) (5) (2) (0)		8		
Matrix Score 37		Cleanup Level in n	ng/kg			
. J/	Diesel Range	Gasoline Range	Benzene	BTEX		
Category A >40	.100	50	0.1	10		
Category B 27 to 40	200	100	0.5	15		
Category C 21 to 26	1,000	500	0.5	50		
Category D < 20	2,000	1,000	0.5	100		

APPENDIX H

MONITORING WELL REPORTS

MONITORING WELL INSTALLATION REPORT Quality Environmental Sampling Project Name: EPMI 4th & Gambell Well No.: MW-1 Drilling Method: Mobile B-61, 8 in. Hollow Stem Auger Project Location: Anchorage, Alaska Observer: Cliff Morrison, QES Installation Date: October 21, 1997 DEPTH OF COMPONENTS SAMPLE IN FEET Relative TOC Elevation: 97.32 Feet LOCATIONS Stick up: Flush to Ground Surface Type of Surface Seal: Concrete Diameter of Borehole: 8 inch Type of Riser Pipe: Schedule 40 PVC ID of Riser Pipe: 2 inch Type of Backfill Around Riser Pipe: Sand 28 Type of Well Seal: Bentonite Chips Sample S-1, 30.0 - 31.5 feet, PID = 67ppm Type of Sand/Filter 35 Around Screen: 10/20 Silica Sand Sample S-2, 35.0 - 36.5 feet, PID = 156ppm-Groundwater at 39.33 feet on 10/28/97 Screen Size: .010 Slotted Remarks:

Quality Environmental Sampling	MO	NITORING WELL INSTALLATION REPORT				
Project Name: EPMI 4th & Gambell Project Location: Anchorage, Alaska Installation Date: October 21, 1997	Well No.: MW-2 Drilling Method: Mobile B-61, 8 in. Hollow Stem Auger Observer: Cliff Morrison, QES					
•	PTH OF	e				
	N FEET	Relative TOC Elevation: 98.13 Feet				
· 	0	Stick up: Flush to Ground Surface				
	2	Type of Surface Seal: Concrete				
		Diameter of Borehole: 8 inch				
		Type of Riser Pipe: Schedule 40 PVC				
		ID of Riser Pipe: 2 inch				
		Type of Backfill				
		Around Riser Pipe: Sand				
	28					
		Type of Well Seal: Bentonite Chips				
	32	, Type of Sand/Filter				
Sample S-1, 35.0 - 36.5 feet, PID = 8ppm	35	Around Screen: 10/20 Silica Sand				
Sample 5-1, 30.0 - 30.0 leas, Fib - 9ppin						
		Screen Size: .010 Slotted				
Sample S-2, 40.0 - 41.5 feet, PID = 6ppm Groundwater at 41.32 feet on 10/28/97	-					
	45					
Remarks:						
Cerron As.						

322-9227

Quality Environmental Sampling MONITORING WELL INSTALLATION REPORT

Project Name: EPMI 4th & Gambell Project Location: Anchorage, Alaska Installation Date: October 22, 1997 Well No.: MW-3

Drilling Method: Mobile B-61, 8 in. Hollow Stem Auger

Observer: Cliff Morrison, QES

SAMPLE LOCATIONS DEPTH OF COMPONENTS IN FEET

28

32

35

45

Relative TOC Elevation: 97.77 Feet

Stick up: Flush to Ground Surface

Type of Surface Seal: Concrete

Diameter of Borehole: 8 inch

Type of Riser Pipe: Schedule 40 PVC

ID of Riser Pipe: 2 inch

Type of Backfill
Around Riser Pipe: Sand

Type of Well Seal: Bentonite Chips

Type of Sand/Filter

Around Screen: 10/20 Silica Sand

Groundwater at 40.56 feet on 10/28/97

Screen Size: .010 Slotted

Remarks:

Groundwater Monitoring and Sampling Record

Facility Number: Street Address:

City, State: 4NC45E46E, 42	<u>45.819</u>					
Monitor Well Number	17w-3	Mw-2	Mw-1			
General Data Well Accessible (Y/N) Well Diameter Depth to bottom of Well (ft) (From MP) Height of Water Column in Well (ft) Liquid Hydrocarbon or Sheen (Y/N) Depth to Water (hold/cut) Depth to Hydrocarbon (hold/cut) Measurement Date and Time	4.8 ~4.8 ~4.5 NA 10/26/97	N	44.2 ~N 39.26 NA 1040			
Well Purging Data Purging Technique Gallons Purged Casing Volumes Purged *	BAILER 22.5 3	2 ~2.5- 3	~2.5° 3	· ·		
Well Sampling Data Sample ID on C.O.C. Sampling Date Sampling Time Sampling Technique Sample Preservation	1/w 3 19/2/py 1300 Barres Kee/Tre	MW-2 -2 1320 -2				
Observations Sheen (Y/N) Odor (Y/N)	N *	N *	2 +			

Comments

* No obor observation MADE

10/28/97 "DEPTH TO WARE" 1 //SMT'S MW-1 = 39.33MW-2 = 41,32

NOTE: All measurements should be referenced from top of casing at surveyed measuring point, unless otherwise documented on this form.

In general, three easing volumes should be removed or the well should be allowed to recover to at least 60% of the pre-purge staticbefore sampling.